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Annotated checklist of insects associated with Garry oak in British Columbia

David Evans

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Abstract

This annotated checklist contains more than 800 insect species associated with Garry oak, *Quercus garryana* Douglas, on southern Vancouver Island, as recorded 1949-1984 from Forest Insect and Disease Survey data. They are catalogued alphabetically by genus and species under family and order, and an index is provided. Included are the approved common names, feeding habits, general significance and relative abundance. Brief descriptive notes are added to families and important species. A key to the common insect groups, adult stages, is given.

Résumé

Cette liste annotée renferme plus de 800 noms d'insectes qui sont associés au chêne de Garry, *Quercus garryana* Douglas, dans le sud de l'île Vancouver selon les registres de 1949 à 1984 du Relevé des insectes et des maladies des arbres. Les noms sont présentés par order alphabétique de genre et d'espèce et sont classés par famille et ordre; un index est fourni. Les noms vernaculaires approuvés sont indiqués, et des données sont présentées sur le régime alimentaire, l'importance générale et l'abondance relative. Une brève description est incluse pour les familles ainsi que pour certaines espèces importantes. Une clé des groupes d'insectes communs, au stade adulte, est présentée.

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Introduction

This publication is a comprehensive checklist of insects and mites associated with Garry oak, *Quercus garryana* Douglas, on southern Vancouver Island, to which area that tree is normally restricted in Canada. Garry oak is unique to its region, and has attained considerable status as a landscape feature. It supports a large and varied insect community, many of the insect species being dependent on it. This population complex remained relatively obscure until detailed studies of oak gall wasps by the author 1959-1972.

More than 800 species are listed herein by scientific name, alphabetically by genus and species under family and order; an index is provided. Species authors are given, as are common names approved by the Entomological Society of America[1]. Many of the insects do not actually feed on oak but are associated with those that do, are scavengers, or utilize the trees for shelter. General occurrence is indicated by numbers from a scale of 1 to 4:

1. specimens rarely found, perhaps only 1 or 2 annually;
2. usually present in small numbers, 3-9 annually;
3. usually present in moderate numbers, 10-30/collection;
4. usually present in large numbers, but sometimes only in localized areas.

[1] Common names of insects and related organisms 1982. Ent. Soc. Amer. 132 pp.

Key to Insect Orders

The key applies principally to the adult stages of the common groups in the checklist.

1.		Three pairs of legs, or appearing legless; body usually more than 2 mm long 2
		Four pairs of legs; body usually less than 1 mm long ..... Acarina: mites
2.	(1)	Sucking/piercing mouthparts 3
		Biting/chewing mouthparts 7
3.	(2)	Mouthparts coiled; wings, if present, with scaly pattern ..... Lepidoptera: moths & butterflies
		Mouthparts beak-like; wings not scaly, often clear 4
4.	(3)	Mouthparts slender and conspicuously jointed; usually two pairs of wings 5
		Mouthparts not obviously jointed 6
5.	(4)	Forewings usually divided into a leathery section and a (clear) membranous section; folded flat at rest ..... Hemiptera: bugs
		Wings, if present, all of similar texture; held roof-like at rest ..... Homoptera: bugs
6.	(4)	One pair of wings ..... Diptera: flies
		Two pairs of fringed wings; soft slender insects usually less than 2 mm long ..... Thysanoptera: thrips
7.	(2)	Hind legs enlarged for jumping ..... Orthoptera: grasshoppers
		Hind legs usually not enlarged for jumping 8
8.	(7)	Forewings shell-like or leathery; rear wings, if present, membranous 9
		Wingless, or all wings of similar texture throughout 10
9.	(8)	Forcep-like appendages at rear of body; insect flat, dark brown ..... Dermaptera: earwigs
		Body usually without conspicuous posterior appendages ..... Coleoptera: beetles (in part)
10.	(8)	Wingless, or apparently so 11
		Obviously winged 14
11.	(10)	Tiny, dark-colored, soft-bodied, gregarious insects, usually less than 3 mm long, with very short antennae; abdomen often with a spring-like appendage underneath ..... Collembola: springtails
		Otherwise, usually larger; no ventral "spring" 12
12.	(11)	"Wasp-waisted"; antennae obviously "elbowed" ..... Hymenoptera (in part): ants
		Thick-waisted; antennae variable 13

13. (12) Soft-bodied insects, pale brown or black, with large, slightly flattened heads and short, bead-like antennae ..... Isoptera: termites (in part)
Otherwise ..... Coleoptera: beetles (in part)

14. (10) Rear wings obviously larger than the forewings, or at least wider ..... Plecoptera: stoneflies
Rear wings smaller than, or about the same width as, the forewings 15

15. (14) All wings approximately the same size, shape, texture and pattern 16
Rear wings smaller than forewings, with much less venation 18

16. (15) Antennae inconspicuous, bristle-like ..... Odonata: dragonflies
Antennae long, thread-like 17

17. (16) Antennae scarcely longer than width of head; insect ochreous-brown or black, including wing veins ..... Isoptera: termites (adults)
Antennae usually much longer than head width, usually approaching body length ..... Neuroptera: lacewings

18. (15) Tiny, active, soft-bodied, thick-waisted insects, usually less than 3 mm long; long, thread-like antennae ..... Psocoptera: barklice
Otherwise, usually larger; body usually shell-like, frequently "wasp-waisted" ..... Hymenoptera (in part): bees, wasps

Annotated List

	Abundance
ACARINA: mites Tiny spider-like creatures having a wide range of habits and hosts, i.e. as predators, scavengers, plant feeders; on or in different plant parts, galls, insects and other animals, etc.	
Acaridae Feeders on a wide range of organic substances.	
Thyreophagus spp.	1
Anystidae: anystid mites Predators.	
Anystis sp.	2
Balaustium sp.	2
Bdellidae: snout mites Predators.	
Bdella longicornis (Linnaeus)	1
Spinibdella cornini (Baker & Block)	2
Thoribdella simplex Atyeo	1
Eriophyidae: gall mites, blister mites Plant feeders; microscopic in size, but often found in large numbers.	
Aceria sp.	1
Phyllocoptes sp.	2
Typholodromus sp.	1
Glyciphagidae Scavengers.	
Glyciphagus domesticus (DeGeer)	2
Oribatidae: beetle mites Fungous feeders.	
Camisia sp.	1
Eremoeus sp.	1
Gymnodamaeus sp.	1
Humerobates humeralis (Hermann)	2
Trichoribates sp.	1
Stigmaeidae Predators.	
Zetzellia mali (Ewing)	1
Zetzellia sp.	2
Tarsonemidae: soft bodied mites Omnivorous feeders, sometimes pests in stored plant material.	
Rhynchotarsonemus sp.	2
Tydeidae Probably predators.	
Lorryia bedfordiensis Evans	2
Lorryia sp.	4
Triophtydeus sp.	1
Tydeus sp.	2
COLEOPTERA: beetles	
Alleculidae: comb-clawed bark beetles The dark colored adults are occasionally found on tree surfaces, but they do little apparent feeding.	
Isomira variabilis Horn Shelter records.	2
Anobiidae: drugstore beetles Although these insects are often household/structural pests, there is a great variety of species and habit. Most of the following will breed in dying bark, twigs, acorns, wood, etc.	
Ernobius marginicollis (Leconte)	1
Ernobius punctulatus (Leconte)	2
Ernobius sp.	2
Trichodesma cristata (Casey)	1
Utobium elegans (Horn)	1
Vrilleta decorata Van Dyke	2
Xestobium affine Leconte	1
Bruchidae: bean weevils	
Bruchus brachialis Fahraeus Vetch bruchid Shelter record.	1

Buprestidae: flat-headed wood borers
Adults may be sheltering on the trees or feeding on plant material. The bark/wood boring larvae are seldom in oak and the following are shelter records.

Buprestis sp. 1

Cantharidae: leather-winged beetles
The predaceous adults may shelter on the bark or foliage, and probably find food there also.

Cantharis divisus Leconte 2

Cantharis oregona Leconte 2

Podabrus cavicollis Leconte 2

Podabrus confraternus Fall 1

Podabrus piniphilus (Eschscholtz) 2

Podabrus pruinosus atrocervicus Fender 1

Silis cava Leconte 2

Silis difficilis Leconte 2

Silis lutea filigera Leconte 1

Silis pallida Mannerheim 2

Carabidae: ground beetles
A large diverse group; larvae and adults are usually active predators.

Lebia ornata Say 1
Shelter records.

Cerambycidae: long-horned beetles, round-headed wood borers
An extensive group of relatively large insects; the white, nearly legless larvae may bore in the wood or other parts of the tree; adults do little feeding, but are sometimes found sheltering. The following are shelter/scavenging records unless otherwise indicated.

Anoplodera crassipes (Leconte) 1

Anoplodera laeta (Leconte) 1
A wood borer; oak is a preferred host.

Centrodera spurca (Leconte) 1

Leptura obliterata (Haldeman) 1

Necydalis cavipennis Leconte 2
A sapwood borer.

Neoclytus conjunctus (Leconte) 2

Phymatodes decussatus Leconte 3
A wood borer.

Phymatodes lecontei Linsley 2
Only adults collected.

Phymatodes vulneratus Leconte 1

Prionus californicus Motschultsky 1
California prionus
A root borer.

Ulochaetes leoninus Leconte 1
Lion beetle

Chrysomelidae: leaf beetles
Small colorful defoliators, but the adults found on oak are usually sheltering.

Bromius obscurus (Linnaeus) 1

Chrysomela mainensis littorea Brown 1

Orsodacne atra (Ahrens) 1

Pyrrhalta decora carbo (Leconte) 1
Pacific willow leaf beetle

Syneta albida Leconte 2

Cicindelidae: tiger beetles
Active predators.

Omus sp. 1
Shelter/scavenger records from dead bark.

Cleridae: checkered beetles
Common active predators; the pink/brown larvae may be found under dead bark in association with bark boring insects; adults may occur anywhere on the trees.

Chariessa elegans Horn 1

Enoclerus eximius Mannerheim 2

Enoclerus sphegeus Fabricius 2

Enoclerus spp. 2

Coccinellidae: ladybird beetles
Common predators.

Adalia annectans Crotch 1

Adalia bipunctata (Linnaeus) 2
Two-spotted lady beetle

Adalia frigida (Schneider) 2

Adalia humeralis Say 1

Adalia spp. 2

Anisocalvia quaturodecimguttata (Linnaeus) 2

Coccinella johnsoni Casey 2

Coccinella monticola Mulsant 2

Coccinella novemnotata Herbst 2

Coccinella trifasciata trifasciata Linnaeus 2

Coccinella spp. 2

Cycloneda sanguinea Linnaeus 3

Hippodamia parenthesis (Say) 2

Mulsantina picta minor (Casey) 2

Mulsantina sp. 1

Nipus niger Casey 1

Psyllobora borealis Casey 1

Psyllobora viginti-maculata taedata Leconte 2

Scymnus calaveras Casey 1

Scymnus lacustris Leconte 2

Scymnus phelpsi Crotch 1

Stethorus picipes Casey 2

Cucujidae: flat bark beetles
Omnivorous feeders, usually found under dead bark.

Cucujus clavipes Fabricius 2

Curculionidae: weevils, snout beetles
A large group with diverse plant-feeding habits. Adults may be found on any part of the tree.

Apion sp. 2

Curculio occidentis (Casey) 3
Filbert weevil
In galls and acorns.

Curculio sp. 2
Develops in acorns.

Dyslobus granicollis (Leconte) 1

Hypera nigrirostris (Fabricius) 1
Lesser clover-leaf weevil

Hyperaspis postica Leconte 2

Magdalis aenescens Leconte 1

Magdalis gentilis Leconte 2

Magdalis hispoides Leconte 1

Nemocestes horni Van Dyke 1

Otiorhynchus ovatus (Linnaeus) 2
Strawberry root-weevil

Otiorhynchus singularis (Linnaeus) 1

Otiorhynchus sulcatus (Fabricius) 2
Black vine-weevil

Phyllobius oblongus (Linnaeus) 1

Pissodes fasciatus Leconte 1

Sciopithes obscurus Horn 2
Obscure root-weevil

Strophosoma melanogrammum 3
Oak trees are favored habitat.

Tychius picirostris (Fabricius) 1
Clover seed-weevil

Dascillidae: soft-bodied plant beetles
Adults occasionally found sheltering.

Eurypogon californicus Horn 1

Macropogon cribricollis Brown 2

Macropogon piceus Leconte 2

Dermestidae: larder beetles, skin beetles
Adults occasionally found sheltering; probably some feeding on diverse material.

Anthrenus sp. 1

Elateridae: click beetles, wireworms
A large group; the adults are frequently found on the tree surface, where they may feed or shelter. Larvae may live under dead bark or in the root area, feeding/scavenging/sheltering. Most of the following data are derived from adult specimens.

Agriotella columbiana Brown 2

Agriotella occidentalis Brown 2

Agriotes thevenetii Horn 2

Ampedus nigrinus Herbst 2

Ampedus varipilis columbianus Brown 1

Ampedus sp. 1

Anchastus militarius corvus Van Dyke 1

Athous scissus Leconte 1

Cardiophorus latiusculus Eschscholtz 2

Ctenicera angusticollis (Mannerheim) 2

Ctenicera bombycina (Germar) 2

Ctenicera callida (Brown) 2

Ctenicera cruciata festiva (Leconte) 2

Ctenicera insidiosa (Leconte) 2

Ctenicera lobata lobata Eschscholtz 1

Ctenicera nigricollis (Bland) 2

Ctenicera propola columbiana (Brown) 2

Ctenicera pudica (Brown) 2
Ctenicera suckleyi (Leconte) 2
Ctenicera sylvatica (Van Dyke) 2
Dalopius corvinus Brown 1
Dalopius insulanus Brown 2
Dalopius tristis Brown 2
Lacon profusus Candeze 2
Limonius aeger Leconte 1
Limonius consimilis Walker 2
Limonius infuscatus Motschulsky 2
Limonius nitidulus Horn 2
Megapenthes nigriventris Leconte 2
Megapenthes stigmosus (Leconte) 2
Negastrius tumescens (Leconte) 1

Helodidae: soft-bodied plant beetles
Adults found sheltering/scavenging.

Cyphon brevicollis (Leconte) 2
Cyphon concinnus (Leconte) 2
Cyphon variabilis (Thunberg) 2

Hydrophilidae: water scavenger beetles

Anacaena limbata Fabricius 1
Shelter records.

Lampyridae: fireflies
The predaceous larvae may be found under old bark; adults, also predaceous, may be found on the tree surface.

Lucidota californica (Motschulsky) 1

Lathridiidae: minute scavenger beetles
Tiny elongate brown beetles sometimes found in dead bark.

Aridius australicus (Belon) 1
Aridius nodifer (Westwood) 1
Corticaria dentigera Leconte 1
Lathridius minutus (Leconte) 1
Melanophthalma gibbosa Herbst 2
Melanophthalma sp. 1

Lucanidae: stag beetles

Platycerus oregonensis Westwood 2
The wood-boring larvae may be found in decayed sections of the trees.

Melandryidae: bark-loving beetles
Elongate dark colored scavenger beetles.

Phryganophila collaris Leconte 1
Prothalpia holmbergi (Mannerheim) 2

Melyridae: soft-winged flower beetles
Predators; might also be found sheltering.

Attalus nigrellus (Leconte) 2
Listrus plenus Casey 2
Listrus sp. 1

Mordellidae: tumbling flower beetles
Scavengers/pollen feeders.

Anaspis atrata Champion 1
Mordella scutellaris Fabricius 1
Mordellistena gregia Liljeblad 1

Nitidulidae: sap-feeding beetles
May be feeding/sheltering.

Brachypterus troglodytes Murray 1
Cateretes sericans (Leconte) 1
Cryptarcha concinna (Melsheimer) 1
Omosita discoidea (Fabricius) 1

Ostomidae: grain- and bark-gnawing beetles
Omnivorous scavengers.

Eronyxa pilosulus (Crotch) 2

Pythidae: narrow-waisted bark beetles
Dark colored predators, sometimes found under dead bark.

Cariderus viridiaeneus (Randall) 1

Scarabaeidae: June beetles
The defoliating adults seldom feed on oak.

Dichelonyx fulgida Leconte 1

Scolytidae: bark beetles, ambrosia beetles, engraver beetles
These insects utilize a wide range of hosts.

Gnathotrichus retusus (Leconte) 1
A wood borer.

Hylurgops porosus (Leconte) 1
A bark borer.

Monarthrum scutellare (Leconte) 2
A wood borer.

Xylechinus montanus Blackman 1
Shelter records.

Staphylinidae: rove beetles
A large group, many of them predaceous as both larvae and adults. The following are shelter/scavenging records.

Acrolocha megarthroides (Fauvel) 1

Acrolocha sp. 1

Amphichroum maculatum Horn 1

Anthobium sp. 1

Molamba sp. 1

Ocypus ater (Gravenhorst) 1

Olophrum sp. 2

Parothius californicus (Mannerheim) 1

Philonthus fuscipennis Mannerheim 1

Philygria debilis (Loew) 1

Quedius fulgidus Fabricius 1

Quedius mesomelinus (Marsham) 1

Quedius pugetensis Hatch 1

Tenebrionidae: darkling beetles
The following records are of adults scavenging on the trees.

Helops californicus Mannerheim 2

Helops laetus Leconte 1

Helops pernitens Leconte 2

Helops regulus (Mannerheim) 2

Ipthimus serratus 1
Larvae and adults are sometimes found in rotting bark/wood.

Throscidae: pseudo click-beetles
Dark colored beetles, the adults sometimes found sheltering/scavenging.

Aulonothroscus validus Leconte 1

Throscus debilis Horn 2

COLLEMBOLA: springtails, snow fleas
Small wingless scavengers, often in damp habitat; sometimes in large numbers.

Entomobryidae

Entomobrya triangularis Schott 2

Morulina sp. 1

Orchesella hexafasciata Harvey 2

Poduridae
Tiny, dark colored insects.

Hypogastrura sp. 1

Onychuirus cocklei Folsom 2

DERMAPTERA: earwigs

Forficulidae
Common scavengers.

Forficula auricularia Linnaeus 2
European earwig

DIPTERA: flies, mosquitoes, gnats, etc.
Most flies found on oak are adults sheltering; some are parasitic on other insects, and a few are predaceous.

Acroceridae
Probably parasitic on spiders.

Opsebius diligens Osten-Sacken 1
Shelter/scavenging records.

Agromyzidae: leaf mining flies
The following records are of scavenging adults.

Agromyza sp.

Calycomyza sp. 1

Liomyza sp. 2

Phytobia subangulata (Malloch) 1

Phytomyza plantaginis Robineau-Desvoidy 1

Phytomyza sp. 2

Anisopodidae
Small flies.

Sylvicola fenestralis (Scopoli) 1

Anthomyidae: stable flies, root maggots
Shelter records.

Botanophila sp. 1

Hylemya alcathoe (Walker) 1

Hylemya fugax (Meigen) 2

Scatophaga furcata (Say) 1

Scatophaga stercoraria (Linnaeus) 1

Asilidae: robber flies, assassin flies
The adults are active predators.

Dicolonus simplex Loew	1
Dioctria sackeni Williston	2
Eucyrtopogon varipennis (Coquillett)	1
Laphria fernaldi (Back)	2
Laphria sp.	2
Nicocles canadensis Curran	1
Tolmerus notatus (Weidemann)	1

Bibionidae: March flies
The following are shelter/scavenging records.

Bibio vestitus Walker	2
Dilophus caurinus (McAtee)	1

Bombylidae: bee flies
Larvae are parasitic, however, the following are shelter records for adults.

Anthrax sp.	1
Hemipenthes sp.	1
Villa agrippina (Osten-Sacken)	1
Villa morio (Say)	1
Villa sp.	1

Calliphoridae: flesh flies

Phormia regina (Meigen) Black blow-fly Shelter records.	1

Cecidomyidae: gall midges
Most of the following are shelter records.

Camplomyza montana (Felt)	1
Lasioptera querciflorae Felt From oak leaf stems.	1
Lasioptera sp.	2
Lestodiplosis grassator (Fyles)	2
Lestodiplosis spp.	2
Mycodiplosis sp.	1
Phaenolauthia sp.	1
Porricondyla sp.	1

Ceratopogonidae: biting midges

Dasyhelea sp. Shelter records.	1

Chamaemyidae
Small flies; the larvae are usually predaceous.

Chamaemyia herbarum (Robineau-Desvoidy)	1
Leucopis spp.	2

Chironomidae: midges
Shelter records.

Chaetocladius sp.	1
Chironomus sp.	2
Crictopus spp.	2
Metriocnemis sp.	1
Nanocladius sp.	1
Orthocladius sp.	1
Procladius bellus (Loew)	1
Smittia sp.	1

Chloropidae: frit flies
Shelter records.

Chlorops sp.	2
Conioscinella melancholica (Becker)	1
Thaumatomyia glabra (Meigen)	1

Culicidae: mosquitoes
The following records are for sheltering adults.

Aedes varipalpus Coquillett	1
Aeroglyphus sp.	1
Culiseta incidens Thompson	1

Dolichopidae: long headed flies
Adults are usually predaceous; larvae have a wide range of habitat, including dying bark.

Chrysotus sp.	1
Condylostylus pilicornis Aldrich	1
Dolichopus andersoni Curran	1
Medetera sp.	1
Sympycnus cuprinus Wheeler	1

Empidae: dance flies
Small predators.

Drapetis sp.	1
Empis virgata Coquillett	2
Empis sp.	2
Leptopiza disparilis Melander	2

Platypalpus spp. 2

Rhamphomyia spp. 2

Heleomyzidae
Small scavenger flies.

Suillia convergens (Walker) 1

Lauxaniidae: plant flies
The sheltering/scavenging adults seldom noticed.

Calliopum quadrisetosum (Thompson) 1

Calliopum sp. 2

Minettia flaveola (Coquillett) 1

Minettia lupulina Fabricius 2

Lonchaeidae
The following records are derived from scavenger activities in decaying wood.

Lonchaea johnseyi McAlpine 2

Lonchaea oriadis McAlpine 1

Lonchopteridae: pointed-wing flies

Lonchoptera furcata Fallen 1
Shelter records.

Milichiidae
Shelter records.

Desmometopa sordidum (Fallen) 1

Madiza glabra Fallen 2

Muscidae: house flies
The following are all shelter records.

Coenosia aliana (Malloch) 1

Coenosia bonita Huckett 1

Coenosia impunctata Malloch 1

Coenosia pilosissima Stein 1

Coenosia tigrina (Fabricius) 1

Dasyphora cyanicolor (Zetterstedt) 1

Fannia serena (Fallen) 1

Helina spp. 1

Ophyra leucostoma Wiedemann 1

Phaonia flava Stein 1

Phaonia pallida Huckett 1

Phaonia parviceps Malloch 1

Mycetophilidae: fungus gnats
Small mosquito-like flies dependent on damp, decaying plant material.

Boletina sp. 1

Mycetophila alata Guthrie 1

Odinidae: odinid flies
Scavengers — likely associated with the mines/tunnels/nests of other insects.

Odinia sp. 1

Opomyzidae
Small flies.

Opomyza petrei Meznil 1
Shelter records.

Otitidae: pictured-winged flies
Plant feeders.

Sciaptera vibrans (Linnaeus) 1
Shelter records.

Phoridae: humpbacked flies
The sheltering/scavenging adults are seldom collected.

Megaselia sp. 2

Phora coangustata Schmitz 1

Phora velutina Meigen 1

Phora sp. 1

Piophilidae: skipper flies
Scavengers.

Allopiophila atrifrons Melander & Spuler 1

Pipunculidae: big-eyed flies

Pipunculus sp. 1
Shelter records.

Psilidae: rust flies

Psila rosae (Fabricius) 1
Carrot-rust fly
Shelter records.

Rhagionidae: snipe flies
Small predators.

Symphoromyia plagens Williston 1

Symphoromyia sackeni Aldrich 1

Sarcophagidae: flesh flies
Parasites.

Sarcophaga houghi Aldrich 1

Sciaridae: dark-winged fungus gnats
Small dark flies, the larvae feed on fungus

Bradysia spp.	2
Sciara sp.	1

Sciomyzidae: marsh flies
The larvae are aquatic feeders. The following are shelter/scavenging records.

Limnellia sp.	1
Limnia loewi Steyskal	1
Limnia vittata Melander	2
Tetanocera vicina Macquart	1
Trypetoptera canadensis (Macquart)	1

Simulidae: black flies
The biting adults may be pests to animals; larvae are aquatic.

Cnephia mutata (Malloch)	1
Prosimulium multidentatum Twinn	1

Sphaeroceridae
Small dark flies.

Copromyza equina Fallen	1

Stratiomyidae: soldier flies
Larvae often live in decaying plant material, and may be predaceous. The adults feed on blood.

Geosargus decorus (Say)	1
Microchrysa polita (Linnaeus)	2
Shelter records.	
Sargus decoratus Say	1

Syrphidae: flower flies
Some larvae are predaceous on small insects. The following records are of adults.

Baccha elongata (Fabricius)	2
Caliprobola pulchra (Williston)	1
Eupeodes volucris (Osten-Sacken)	1
Melanostoma angustatum Williston	1
Melanostoma pictipes Bigot	2
Merodon equestris (Fabricius)	1
Narcissus bulb fly	
Neocnemodon sp.	1
Parapenium sp.	1
Scaeva pyrastri (Linnaeus)	1
Syritta pipiens (Linnaeus)	1
Syrphus vitripennis Meigen	1
Toxomerus occidentalis Curran	1

Tachinidae: tachinid flies
The larvae are parasitic; most of the following species were reared from caterpillars on oak.

Actia interrupta Curran	2
Actia n.sp.	1
Bigonocheta spinipennis (Meigen)	1
Ceromasia auricaudata (Townsend)	2
Chaetophlepsis orbitalis Webber	2
Chaetophlepsis semiothisae Brooks	2
Compsilura concinnata Meigen	2
Elfia setigera (Thompson)	1
Elfia spp.	2
Epalpus signifera (Walker)	1
Eulasiona nigra Curran	1
Gymnosoma fuliginosum Robineau-Desvoidy	1
Ictericophyto tibialis Curran	2
Leschenaultia leucophrys (Wiedemann)	1
Madremyia saundersi (Williston)	2
Nowickia algens (Wiedemann)	1
Phryxe pecosensis (Townsend)	1
Psalidopteryx brunnea Brooks	1
Pseudoperichaeta erecta (Coquillett)	1
Tachinomyia montana (Smith)	1
Tachinomyia similis (Williston)	2
Wagneria ocellaris Reinhard	1
Winthemia occidentis Reinhard	2
Winthemia rufopicta Bigot	1

Tephritidae
Plant feeders; the following are shelter records.

Rhagoletis berberis Curran	1
Rhagoletis pomonella (Walsh)	1
Apple maggot	

Therevidae: stiletto flies
Larvae are predaceous; the following records are for sheltering adults.

Psilocephala canadensis Cole 2

Thereva vialis Osten-Sacken 1

Tipulidae: crane flies
The larvae feed on plant material; some of the following are shelter records.

Ctenophora angustipennis Loew 1
From oak lichens and rotting bark.

Ctenophora sp. 1
From rotting bark

Dicranoptycha sp. 1

Limonia sp. 1

Molophilus sp. 2

Tipula spp. 1

Trichoceridae: winter crane flies

Trichocera columbiana (Alexander) 1
Shelter records.

HEMIPTERA (half-wings): bugs
True bugs, with sucking mouthparts. A large group of diverse habit — primarily sap feeders or predators.

Alydidae: broad-headed bugs
Usually plant feeders.

Alydus conspersus Montadon 1

Megalotomus quinquespinosus (Say) 2

Anthocoridae: minute pirate bugs
Small active predators.

Anthocoris antevolens White 2

Anthocoris musculus Say 2

Anthocoris spp. 2

Lyctocoris sp. 1

Orius tristicolor (White) 1

Coreidae: squash bugs
Plant feeders.

Coriomeris humilis Uhler 1

Leptoglossus occidentalis Heidemann 1

Lygaeidae: plant bugs, chinch bugs
Plant feeders.

Geocoris bullatus (Say) 1

Kleidocerys resedae geminatus Say 2

Kleidocerys sp. 1

Rhyparochromus cheragra californicus Van Duzee 1

Miridae: leaf bugs, plant bugs
Most are plant feeders, but a few are predators. Some of the following may be shelter records.

Ceratocapsus punctulatus (Reuter) 1

Deraecoris incertus Knight 2

Deraecoris sp. 1

Heterotoma meriopteram (Scopoli) 1

Irbisia solani Heidemann 2

Lepidopsallus sp. 1

Lygus nubilatus (Knight) 1

Lygus spp. 1

Macrotyloides sp. 1

Megaloceroea recticornis Stater 1

Melanotrichus concolor Kirschbaum 1

Phytocoris interspersus Uhler 1
Predator.

Pilophorus amoenus Uhler 1

Psallus piceicola Knight 1

Neididae: stilt bugs
Slow-moving, attenuated, brown predators.

Neides muticus (Say) 2

Pentatomidae: stink bugs
Large distinctive insects; some are predators, some are sap-suckers.

Apateticus crocatus (Uhler) 2
Predator.

Chlorochroa ligata (Say) 2
Conchuela
Plant feeder.

Chlorochroa sp. 1
Plant feeder.

Elasmostethus cruciatus Say 2
Plant feeder.

Euschistus euschistoides Vollenhoven 2
Plant feeder.

Euschistus variolarius (Palisot de Beauvois) 2
One-spotted stink bug
Plant feeder.

Neottiglossa undata (Say) 1
Plant feeder.

Peribalus limbolarius Stal 1
Predator.

Podisus modestus (Dallas) 2
Predator.

Podisus serieventris Uhler 2
Predator.

Thyanta custator (Fabricius) 1
Plant feeder.

Ploiariidae: assassin bugs
Predators.

Empicoris canadensis Parshley 1

Eurygaster alternata (Say) 1

HOMOPTERA: bugs
True bugs, with sucking mouthparts; all wings similarly textured; feeders on plant juices.

Achilidae: lantern flies

Catonia nemoralis Van Duzee 2
Feeding records.

Elymana sp. 1
Feeding records.

Adelgidae: woolly aphids
A large common family, but seldom found on oak,and rarely causing damage to it.

Phylloxera sp. 1

Xerophylla sp. 1

Aphididae: aphids, plant lice
Relatively uncommon on oak. Some of the following are probably shelter records.

Aphis fabae Scopoli 1
Bean aphid.

Cinara spp. 1

Dactynotus sp. 1
Feeding records.

Hyalopterus pruni (Geoffroy) 1
Mealy plum aphid.

Myzocallis maureri (Swain) 1
Feeding records.

Periphyllus lyropictus (Kessler) 1
Norway-maple aphid.

Periphyllus testudinacea Fernie 1

Stegophylla quericola (Monell) 2
Feeding records.

Thelaxes albipes Richards 1
Feeding rcords.

Thelaxes californica Davidson 1
Feeding records.

Cercopidae: spittlebugs
The nymphs of some species form sheltering "spit" bubbles on plant stems/leaves.

Aphrophora permutata Uhler 2
Feeding records.

Philaenus spumarius (Linnaeus) 2
Meadow spittlebug
Feeding records.

Cicadellidae: leaf-hoppers
Small slender bugs that can move by jumping. Most of the following are probably feeding records.

Aceratagallia sanguinolenta (Provancher) 1
Clover leaf-hopper

Aceratagallia sp. 1

Arboridia sp. 1

Colladonus aureolus (Van Duzee) 2

Colladonus flavocapitatus (Van Duzee) 2

Colladonus geminatus (Van Duzee) 1

Deltocephalus fuscinervosus Van Duzee 1

Draeculacephala noveboracensis Fitch 1

Edwardsiana bergmanni (Fallen) 1

Empoa gillettei Van Duzee 2

Empoasca sp. 2

Erythroneura sp. 2

Scaphytopius oregonensis (Baker) 2

Scaphytopius sp. 1

Sorhoanus flavovirens (Gillette & Baker) 1

Zygina flammigera (Geoffroy) 1

Cicadidae: cicadas
Shelter records.

Platypedia areolata (Uhler) 1

Coccidae: scale insects, mealybugs
A large diverse family; the adults are usually sessile. Some occasionally cause minor damage.

Asterolecanium variolosum (Ratzeburg) Golden oak-scale Oak is the preferred host.	1
Lecanium tiliae (Linneaus)	2
Lecanium sp.	2

Membracidae: tree hoppers
Usually found clustered on the twigs in family groups. They suck plant juices.

Palonica tremulata (Ball)	2
Platycotis maritimus Van Duzee	2
Platycotis vittatus Fabricius	2

Ortheziidae: ensign coccids
Small slender scale insects.

Arctorthezia sp.	1

Psyllidae: jumping plant lice
The tiny nymphs are sometimes sessile.

Aphalara sp.	2
Psylla sp. Sometimes present in sufficient quantity to cause premature leaf fall and limited branch mortality.	4

HYMENOPTERA: bees, wasps, ants, sawflies, horntails, etc.
Some gall-causing wasps are specific to oak; other Hymenoptera are scavengers, parasites or predators of oak insects, or seeking shelter.

Andrenidae: burrowing bees
Shelter/scavenging records.

Andrena angustitarsata Viereck	1
Andrena candida Smith	1

Apidae: honey bees, bumble bees
Scavenging records.

Apis mellifera Linnaeus Honey bee	1
Bombus terricola occidentalis (Greene)	1
Psithyrus insularis (Smith)	1

Bethylidae
Small parasitic wasps.

Perisierola sp. From gall insects.	1

Braconidae: braconid wasps
The following are all parasites, but a few could be only shelter/scavenger records.

Apanteles solitarius (Ratzeburg)	1
Apanteles n.sp.	2
Apanteles spp.	2
Aphidius sp.	1
Atanycolus anacomidis Cushman	2
Atanycolus sp.	1
Bracon xanthonotus Ashmead	2
Bracon sp.	1
Centistes n.sp.	1
Charmon extensor (Linnaeus)	1
Chelonus sp.	1
Eubadizon strigitergum (Cushman)	2
Gnapodon n.sp.	1
Iphiaulax n.sp.	1
Meteorus hyphantriae Riley	2
Meteorus spp.	2
Microgaster peroneae Walley	2
Microgaster sp.	1
Microtypus n.sp.	1
Opius downesi Gahan	1
Orgilus obscurator (Nees)	1
Perilitus coccinellae Shrank	1
Praon sp.	2

Ceraphronidae
Small parasitic or hyperparasitic wasps.

Ceraphron sp.	2

Chalcidae: chalcid wasps
Small parasites of insect larvae.

Spilochalcis flavopicta (Cresson)	2

Chrysididae: cuckoo wasps, gold wasps
Metallic green/purple wasps whose larvae live parasitically in other wasps' nests.
The following are scavenger/shelter records.

Chrysis pacifica Say 1

Chrysis spp. 2

Holopyga sp. 1

Omalus aeneus (Fabricius) 1

Omalus spp. 1

Cimbicidae: cimbicid sawflies
Large colorful defoliators, most frequent on deciduous plants.

Zaraea americana Cresson 2

Cynipidae: gall wasps
Common; many gall forms, often in large numbers; frequently on leaves or in bark. Most of the following species are restricted to oak.

Andricus opertus (Weld) 4
A bud gall.

Andricus verensis Weld 2

Andricus spp. 4

Bassettia ligni Kinsey 4
Large number of the bark galls can cause stunting.

Bassettia spp. 3

Besbicus mirabilis (Kinsey) 4
The large spherical leaf-galls seem to cause no problems for the trees.

Callirhytis spp. 3

Ceroptres montensis Weld 4
An inquiline (inhabitant) in other galls.

Ceroptres sp. 2
An inquiline in other galls.

Chilaspis sp. 1

Disholcaspis eldoradensis (Beutenmueller) 4
Small stems can be killed if large numbers of the red galls are present.

Disholcaspis simulata vancouverensis Kinsey 3

Disholcaspis spp. 4

Liodora pattersonae (Fullaway) 4
A leaf gall.

Liodora spp. 4

Loxaulus brunneus atrior (Kinsey) 3

Loxaulus sp. 3

Neuroterus washingtonensis Beutenmueller 4
Young trees can be deformed and stunted if the small bark galls are numerous.

Neuroterus spp. 4

Sphaeroteras trimaculosa (McCracken & Egbert) 4
A leaf gall.

Sphaeroteras sp. 2

Synergus garryana Gillette 4
An inquiline in other galls.

Synergus pacificus McCracken & Egbert 4
An inquiline in other galls.

Synergus spp. 4
Inquilines in other galls.

Xanthoteras obconicum (Weld) 4
A root gall.

Xanthoteras spp. 2

Dryinidae
Small wasps parasitic on bugs.

Anteon hirtifrons Whittaker 1

Encyrtidae: encyrtid wasps
Small metallic parasites.

Blastothrix sericea (Dalman) 2

Copidosoma deceptor Miller 2

Copidosoma spp. 2

Eucharitidae: eucharitid wasps
Small parasites.

Pseudochalcura sp. 1

Eulophidae: eulophid wasps
Small parasites.

Chrysocharis giraulti Yoshimoto 2

Chrysocharis truncatipennis Yoshimoto 2

Chrysocharis spp. 2

Eulophus orgyiae (Fitch) 2

Pediobius tarsalis (Ashmead) 1

Pnigalio felti (Crawford) 2

Sympiesis enargiae Miller 1

Sympiesis marylandensis (Girault) 1

Sympiesis nigripes Ashmead 2

Tetrastichus garryana Burks 3
The most common parasite of gall wasps.

Tetrastichus spp. 3

Zagrammosoma centrolineatum Crawford 3

Zagrammosoma sp. 2

Eupelmidae
Small parasitic wasps.

Eupelmidae spp. 3

Macroneura vesicularis (Retzius) 2

Eurytomidae: eurytomid wasps
Small dark wasps of varying habit. The following are from the galls of other insects; the latter are destroyed by the eurytomids.

Eudecatoma globuli Balduf 4

Eudectoma varians (Walsh) 4

Eudectoma spp. 4

Eurytoma spp. 3

Figitidae: figitid wasps
Small pupal parasites.

Aegilips sp. 1

Anacharis sp. 1

Figites sp. 1

Melanips sp. 1

Formicidae: ants
Ants sometimes scavenge on oak trees, and occasionally have nests in galls or decayed tree parts.

Camponotus vicinus Mayr 2

Formica fusca Linnaeus 2
Silky ant

Formica integroides Emery 2

Formica spp. 2

Lasius alienus (Foerster) 2
Cornfield ant

Lasius niger sitkaensis Pergande 2

Lasius spp. 2

Leptothorax nevadensis Wheeler 2

Leptothorax rugatulus Emery 2

Leptothorax spp. 2

Tapinoma sessile (Say) 2
Odorous house ant

Halictidae: sweat bees
Small dark colored bees.
Feeding/scavenging data.

Dialictus sp. 1

Evylaeus cordelyi (Crawford) 1

Evylaeus foxii (Robertson) 1

Ichneumonidae: ichneumon wasps
Some of these parasitic wasps have a wide host range. Most of the following species have been recovered from oak feeding insects.

Agrypon provancheri (Dalla-Torre) 1

Aoplus cestus (Cresson) 2

Apechtis ontario (Cresson) 1

Aritranis imitator nigriventris Townsend 1

Campoletis sp. 1

Casinaria sp. 1

Chasmias sp. 1

Coccigominus pedalis (Cresson) 1

Cryptopimpla sp. 1

Diadegma conodor (Viereck) 1

Diadegma eureka (Ashmead) 1

Diadegma sp. 1

Dichrogaster crassus (Provancher) 1

Dusona sp. 1

Endasys sp. 1

Euceros thoracicus Cresson 1
Hyperparasite.

Exochus sp. 2

Gelis spp. 2
Hyperparasites.

Glypta sp. 1

Hyposoter annulipes (Cresson) 1

Hyposoter fuscitarsus (Viereck) 1

Hyposoter spp. 2

Ichneumon sp. 1

Ischnus inquisitorius atriceps (Cresson) 1

Itoplectis conquisitor (Say) 1

Liotryphon nucicola (Cushman) 2

Lissonota sp. 1

Megastylus sp. 1

Mesochorus tachypus Holmgren 2
Hyperparasite.

Mesochorus spp. 2
Hyperparasites.

Nemeretis sp. 1

Patrocloides perluctuosus (Provancher) 1

Phaeogenes sp. 2

Scambus hirticauda Provancher 2

Scambus hispae (Harris) 1

Theronia atalantae (Poda) 1

Triclistus sp. 1

Megachilidae: leaf cutting bees
Large dark insects.

Osmia lignaria propinqua Cresson 1
Feeding/shelter records.

Ormyridae: ormyrid wasps
Parasites/scavengers frequently found in galls.

Ormyrus spp. 3

Perilampidae
Small wasps, usually secondary parasites.

Perilampus fulvicornis Ashmead 2

Platygasteridae
Small parasitic wasps, often black and yellow.

Leptacis sp. 1

Sactogaster sp. 1

Pompilidae: spider wasps
Predators.

Aporus luxus assimilis (Banks) 1

Pteromalidae
Small parasitic wasps, often brightly metallic.

Cecidostiba sp. 2

Dibrachoides dynastes (Foerster) 1

Habrocytus sp. 3

Mesopolobus spp. 2

Sapygidae
Parasites on other wasps.

Sapyga sp. 1

Scelionidae
Small dark wasps; parasites of insect eggs.

Telenomus dalmani (Ratzeburg) 2

Telenomus sp. 2

Sphecidae: mud wasps, thread-waisted wasps
Predators/scavengers.

Crabro sp. 1

Crossocerus sp. 1

Eupilis sp. 1

Lestiphorus piceus (Handlirsh) 1

Passoloecus mandibularis (Cresson) 2

Passoloecus sp. 2

Pemphredon giffardi (Rohwer) 1

Pemphredon sp. 1

Stigmus sp. 1

Tenthredinidae: sawflies
Neither the smooth tapered larvae, usually defoliators with six pairs of ventral prolegs, or the sheltering and scavenging adults, are common on oak.

Caliroa sp. 2
Feeding records.

Endelomyia aethiops (Fabricius) 1
Shelter/scavenging records.

Rhogogaster lateraria (Cresson) 1
Shelter/scavenging records.

Tenthredo erythromera Provancher 1
Shelter/scavenging records.

Torymidae: torymid wasps
Parasites/scavengers, often common in galls.

Monodontomerus sp. 2

Torymus giganteus Huber 4
Females with long ovipositors.

Torymus spp. 3

Vespidae: social paper wasps, hornets
The adults are active scavengers/predators, or could be nesting/sheltering.

Ancistrocerus waldeni excavatus Bequaert 1

Mischocyttarus flavitarsis idahoensis Bequart 2

Polistes fuscatus aurifer Saussure 2
Golden paper-wasp
A solitary predator.

Symmorphus sp. 1

Vespula atropilosa (Sladen) 2
A black and yellow paper wasp.

Vespula consobrina (Saussure) 1

Vespula maculata (Linnaeus) 2
A large black and white
paper wasp.

Vespula pennsylvanica (Saussure) 2
Western yellow-jacket

Vespula vulgaris (Linnaeus) 2

ISOPTERA: termites

Kalotermitidae
Nest/shelter records.

Zootermopsis angusticollis (Hagen) 2
Found in decayed sections of the trees
or near the ground. The winged adults
occasionally shelter on the bark or
foliage.

LEPIDOPTERA: moths, butterflies
The larvae may be defoliators,
leaf-rollers, miners, borers, etc.
Most of the following are feeding
records unless otherwise indicated.

Adelidae
Small moths with long antennae.
Shelter records.

Adela septentrionella Walsingham 1

Adela trigrapha Zeller 1

Arctiidae: tiger moths, woolly bears
The hairy bristly larvae of these
relatively large moths commonly
feed on herbage or deciduous
plants; they are sometimes vividly
colored.

Lophocampa (*Halisidota*) *argentata* (Packard) 2
Silver-spotted tiger moth

Lophocampa (*Halisidota*) *maculata angulifera* 1
(Walker)
Spotted tussock moth

Blastobasidae: small webbing caterpillars

Valentina glandulella Riley 2
Feeding areas often in association
with other insects.

Choreutidae
Small moths with larvae of
diverse habits.

Choreutis pariana (Clerck) 1
Apple-and-thorn skeletonizer

Coleophoridae: case-bearers

Coleophora sp. 1
Shelter records.

Cosmopterygidae
Small colorful moths; the
larvae may be miners.

Cosmopteryx hermodora Meyrick 1

Elachistidae
Small moths.

Elachista sp. 1

Gelechiidae: small leaf miners
Many species with a wide host range.
The following are feeding records
unless otherwise indicated.

Aristotelia fungivorella Clemens 1

Chionodes petalumensis Clarke 1

Chionodes trichostola (Meyrick) 3
Oak is a preferred host.

Chionodes sp. 1

Coleotechnites atrupictella (Dietz) 1
Shelter records.

Coleotechnites quercivorella (Chambers) 1

Gelechia sp. 1
Shelter records.

Laverna decorella (Stephens) 1
From stem galls.

Telphusa sedulitella Busck 3
Oak is a preferred host.

Trichotaphe trimaculella Chambers 1
Shelter records.

Geometridae: loopers, inchworms
A larva of this large common family
is characterized by a long slender
body, usually hairless, with only one pair
of abdominal prolegs. The following species
are solitary defoliators, although large
numbers may sometimes be in close proximity.

Anthelia hyperborea Hulst 1

Besma quercivoraria Guenee 1

Biston cognataria (Guenee) 1

Campaea perlata Guenee 2

Coniodes plumogeraria Hulst 2

Cyclophora dataria (Hulst) 2
Oak is the preferred host for this russet insect.

Ectropis crepuscularia Schiffermueller 2

Erannis vancouverensis Hulst 3

Eupithecia annulata Hulst 2

Eupithecia graefi vancouverata Taylor 1

Eupithecia maestosa harlequinaria Dyar 2

Eupithecia spp. 2

Gabriola dyari Taylor 1

Hydriomena crokeri Swett 1

Hydriomena manzanita Taylor 1

Hydriomena marinata exasperata Barnes & McDunnough 1

Hydriomena nubilofasciata Packard 3
Oak is the principal host for the slender brown larvae.

Hydriomena spp. 1

Iridopsis emasculata (Dyar) 1

Lambdina fiscellaria somniaria (Hulst) 3
Western oak-looper
Oak is the usual host for this brown-lined looper, which sometimes occurs in sufficient numbers to create severe defoliation, and even mortality to large branches.

Melanolophia imitata Walker 1

Nematocampa filamentaria Guenee 1
Filament bearer

Neoalcis californiaria latifasciaria Packard 2

Operophtera bruceata (Hulst) 2
Bruce spanworm

Operophtera brumata (linneaus) 4
Wintermoth
Oak is a favorite host plant, and twigs and larger growth may be killed by severe defoliation.

Paraptera danbyi Hulst 1

Pero behrensarius Packard 1

Pero morrisonarius Henry Edwards 1

Scopula quinquelinearia Packard 1

Semiothisa teucaria Strecker 2
Oak is the preferred host.

Synaxis jubararia Hulst 2

Triphosa haesitata (Guenee) 2

Venusia pearsalli Dyar 2

Glyphipterygidae: leaf binders
Small, leaf-webbing defoliators.

Glyphipteryx bifasciata (Walsingham) 1

Gracillaridae: leaf blotch miners
"Airplane moths" with slender feathery wings. The following are feeding records.

Caloptilia (*Gracillaria*) *alnivorella* (Chambers) 2

Caloptilia (*Gracillaria*) *invariabilis* (Braun) 3

Caloptilia (*Gracillaria*) *sanguinella* (Beutenmueller) 2

Caloptilia (*Gracillaria*) spp. 2

Cameraria lobatiella Opler and Davis 2

Cameraria penetekes Opler and Davis 1

Phyllonorycter (*Lithocolletis*) spp. 2

Heliodinidae: leaf skeletonizers
Tiny brightly marked moths.

Schrekensteinia festaliella Hubner 1
Blackberry skeletonizer
Feeding records.

Heliozelidae: shield bearers
Tiny leaf miners.

Coptodisca arbutiella Busck 1
Shelter records; one feeding record.

Hesperidae: skippers
Stout bodied insects; the moths are fast day-fliers. Feeding records.

Erynnis propertius Scudder and Burg 2
Oak is a preferred host.

Ochlodes sylvanoides Boisduval 2

Lasiocampidae: tent-caterpillars, lappet moths
The following are feeding records, but many other host plants are usually preferred.

Epicnaptera americana Harrison 2

Malacosoma californicum pluviale (Dyar) 2
Western tent-caterpillar

Malacosoma disstria Hubner 1
Forest tent-caterpillar

Lycaenidae: hairstreaks, coppers, meadow-blues
Small butterflies. Solitary defoliators. Shelter records.

Celastrina argiolus echo (Edwards) 1

Plebeius scudderi Edwards 1

Lymantriidae: tussock moths
Larvae are characterized by a "toothbrush" of pale hairs on top of the back.

Leucoma salicis (Linneaus) 1
Satin moth

Orgyia antiqua badia (Henry Edwards) 2
Rusty tussock moth

Lyonetidae: ribbed case bearers
Tiny defoliators.

Bucculatrix sp. 1

Nepticulidae: leaf miners
Small moths.

Stigmella latifasciella Chambers 2

Stigmella sp. 1

Noctuidae: cutworms
Usually large solitary defoliators.

Acronicta marmorata Smith 1

Anomogyna infimatis Grote 1

Apamea alia (Guenee) 1

Aseptis binotata Walker 2

Catocala aholibah Strecker 2
Oak is the preferred host of this large dark underwing.

Cissusa mucronata Grote 2
Oak is a preferred host for this stocky pale brown cutworm.

Epizeuxis americalis Guenee 1

Erastria albidula Guenee 1

Lithophane amanda (Smith) 1

Lithophane contenta (Grote) 2

Lithophane pertorricla (McDunnough) 2

Lithophane vivida (Dyar) 1

Lithophane spp. 2

Orthosia hibisci Guenee 2

Orthosia pacifica Harvey 2

Orthosia transparens Grote 2

Panthea portlandia Grote 1

Perispasta caeculalis Zeller 1

Polia sp. 2

Xylomyges cognata Smith 1

Xylomyges crucialis Harvey 2

Xylomyges simplex Walker 1

Xylomyges sp. 1

Nolidae
Small fuzzy defoliators.

Celama clethrae Dyar 2
Oak is the only food plant so far reported.

Celama sp. 1

Notodontidae: prominents
Commonly named because of the protruberances and tufts on the caterpillars and moths.

Nadata gibbosa oregonensis Butler 2
Oak is a favorite host plant.

Schizura ipomoeae Doubleday 1

Schizura semirufescens (Walker) 1

Nymphalidae: brush-footed butterflies

Limenitis lorquini burrisonii Maynard 1
Feeding records.

Oecophoridae
The small caterpillars live in webs on a wide variety of plant material.

Agonopterix nervosa Haworth 1

Carcina quercana (Fabricius) 2
Oak is the only recorded host.

Endrosis sarcitrella Linnaeus 1

Hoffmannophila pseudospretella (Stainton) 3
Brown house-moth

Olethreutidae: bud moths
This large group of small insects includes many species of diverse feeding habits.

Dichrorampha vancouverana McDunnough 2
Shelter records.

Epiblema periculosana Heinrich 1
Shelter records.

Epinotia emarginana Walsingham 3
Oak is a favorite host plant.

Epinotia johnsonana Kearfott 2
Feeding records.

Epinotia lindana Fernald 1
Feeding records.

Epinotia plumbolineata russata Heinrich 2
Feeding records.

Epinotia solicitana Walker 2
Feeding records.

Epinotia terracoctana Walsingham 1
Shelter records.

Epinotia spp. 2
Feeding records.

Melissopus latiferreanus (Walsingham) 2
Filbertworm
Feeds in galls and acorns.

Spilonota ocellana Denis & Schiffermueller 2
Eye-spotted budmoth
Oak is a preferred host.

Papilionidae: swallowtail butterflies

Papilio zelicaon Lucas 1
Shelter records.

Phalonidae
Small moths.

Commophila fuscodorsana Kearfoot 1
Feeding records.

Plutellidae: diamondback moths
Small miners/defoliators.

Abebaea subsylvella Walsingham 3
Oak is a preferred host.

Euceratia castella Walsingham 2

Harpipteryx dentiferella Walsingham 1

Pterophoridae: plume moths
Small leaf-webbers.

Oidaematophorus gratiosus Fisher 2
Feeding records.

Pyralidae: snout moths
Larvae may be miners, borers, leaf-rollers, etc.

Crambus sp. 1

Eudonia rectilinea (Zeller) 2

Phlyctaenia sambucalis Schiffermueller 1

Pyrausta perrubralis saanichalis Munroe 1

Udea profundalis Packard 1

Saturniidae: silk-moths
The large caterpillars rarely feed on oak.

Antheraea polyphemus (Cramer) 1
Polyphemus moth

Hyalophora euryalus (Boisduval) 1
Ceanothus silk-moth

Pseudohazis eglanterina Boisduval 1

Tineidae: clothes moths

Tinea sp. 1
Feeding records.

Tortricidae: leaf-rollers
A large group of small drab insects, many species considered pests because of their boring, mining and defoliating habits. The following are all feeding records.

Archips fervidana (Clemens) 1
Oak webworm

Archips rosanus Linnaeus 2

Archips sp. 2

Argyrotaenia citrana (Fernald) 1
Orange tortrix

Argyrotaenia dorsalana (Dyar) 1

Argyrotaenia sp. 1

Batodes angustiorana Haworth 2

Choristoneura rosaceana (Harris) 2
Oblique-banded leaf-roller

Choristoneura zapulata Robinson 1

Decodes fragariana Busck 2
Oak is a preferred host.

Pandemis canadana Kearfott 1

Pandemis cerasana (Hubner) 2
Oak is a favorite host, and is occasionally subject to severe defoliation.

Pandemis limitata (Robinson) 1
Three-lined leaf-roller.

NEUROPTERA: lacewings, golden-eyes
Larvae and adults of these delicate insects are active predators on other small insects.

Chrysopidae: green lacewings

Chrysopa carnea Stephens Common green lacewing	2
Chrysopa spp.	2
Meleoma emuncta (Fitch)	2
Nothochrysa californica Banks	1
Nothochrysa spp.	2

Hemerobiidae: brown lacewings

Hemerobius pacificus Brooks	2
Hemerobius stigmaterus Fitch	1
Hemerobius spp.	2

Raphidiidae: snakeflies
Both larvae and adults are active predators.

Agulla adnixa Hagen	2
Agulla assimilis Albarda	2

ODONATA: dragonflies, damselflies
The fast-flying adults are predaceous, as are the aquatic larvae.

Coenagrionidae: damselflies

Enallagma boreale (Selys)	1
Enallagma sp.	1
Ischnura cervula Selys	1
Lestes disjunctus Selys	1

Libellulidae: dragonflies

Sympetrum illotum (Hagen)	1

ORTHOPTERA: crickets, locusts, grasshoppers
Herbage feeders.

Acrididae: grasshoppers

Melanoplus bruneri Scudder	1
Melanoplus femur-rubrum femur-rubrum (DeGeer)	1
Melanoplus spp.	1
Trimerotropis suffusus Scudder	1

Tettigoniidae: camel crickets

Acrydum brunneri (Bolivar)	1
Ceuthophilus agassizii Scudder	1

PLECOPTERA: stoneflies
The aquatic larvae are predacious. The following are shelter records for adults.

Nemouridae

Blaste confraternus Banks	1
Nemoura dimicki Frison	1
Nemoura sp.	1

PSOCOPTERA: barklice, booklice
Small active, soft-bodied scavengers, sometimes occurring in large numbers on the bark.

Laschescillidae

Lachescilla silvicola Chapman 2

Liposcelidae: booklice
Feed on molds and exudates.

Liposcelis silvicola Chapman 1

Liposcelis sp. 1

Psocidae: barklice

Ectopsocus californicus (Banks) 4

Ectopsocus spp. 4

Elipsocus sp. 1

Epilopsocus sp. 1

Graphopsocus cruciatus Hagen 2

Mesopsocus immunis (Stevenson) 2

Mesopsocus spp. 2

Myopsocus sp. 1

Psocus perplexus Walsh 2

Stenopsocus cruciatus Linnaeus 1

THYSANOPTERA: thrips

Aeolothripidae: broad-winged thrips
Predators.

Aeolothrips fasciatus (Linnaeus) 1

Phloeothripidae: tubular thrips
Varied habits: predaceous, plant feeding, scavenging, etc.

Haplothrips leucanthemi (Schrank) 1

Haplothrips mali (Fitch) 1

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